# Rec'd PCT/PTO 19 APR 2002

TRANSMITTAL LETTER TO THE UNITED STATES Attorney Docket No. 02075							
DESIGNATED/ELECTED OFFICE (DO/EO/US)							
CONCERNING A FILING UNDER 35 U.S.C. 371							
INTERNATIONAL APPLICATION NO. PCT/GB00/04087 INTERNATIONAL FILING DATE October 23, 2000 PRIORITY DATE CLAIM October 21, 1999							
TITLE OF INVENTION IMPLANT ALIGNMENT							
APPLICANT(S) FOR DO/EO/US							
Ashok Sethi & Peter Sochor							
Applicant herewith submits to the United States Designated Office (DO/EO/US) the follo	wing items and other information:						
<ol> <li>This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</li> <li>This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</li> <li>This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).</li> <li>A proper Demand for International Preliminary Examination was made by the 19<sup>th</sup> month from the earliest claimed priority date.</li> <li>A copy of the International Application as filed (35 U.S.C. 371(c)(2))</li> </ol>							
<ul> <li>a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).</li> <li>b. ☐ has been transmitted by the International Bureau.</li> <li>c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).</li> <li>6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).</li> <li>7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3).</li> <li>a. ☐ are transmitted herewith (only if not required by the International Bureau).</li> <li>b. ☐ have been transmitted by the International Bureau.</li> <li>c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. ☐ have not been made and will not be made.</li> <li>8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3).</li> <li>9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4).</li> <li>10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5).</li> </ul>							
Items 11 to 16 below concern document(s) or information included:							
<ul> <li>11. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. As assignment document for recording. A separate cover sheet in compliance wi</li> <li>13. A FIRST preliminary amendment.</li> <li>A SECOND or SUBSEQUENT preliminary amendment.</li> <li>14. A substitute specification.</li> <li>15. A change of power of attorney and/or address letter.</li> <li>16. Other items or information:</li> </ul>	th 37 CFR 3.28 and 3.31 is included.						
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PATENT TRADEMARK OFFICE

10/089102 17. Market The following fees are submitted: CALCULATIONS PTO USE ONLY BASIC NATIONAL FEE (37 CFR 1.492 (a)(1)-(5): Neither international preliminary examination fee (37 CFR 1.482) Nor international search fee (37 CFR 1.445(a)(2) paid to USPTO And International Search Report not prepared by EPO or JPO........... \$1,040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by EPO or JPO......\$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International search fee (37 CFR 1.445(a)(2)) paid to USPTO...... \$740.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) But all claims did not satisfy provisions of PCT Article 33(1)-(4)......\$710.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) And all claims satisfied provisions of PCT Article 33(1)-(4)..... \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT = \$890.00 Surcharge of \$130.00 for furnishing oath or declaration later than 20 ⊠ 30 \$130.00 months from the earliest claimed priority date (37 CFR 1.492(e). CLAIMS NUMBER FILED **NUMBER EXTRA RATE Total Claims** 8 -20= X \$18.00 \$ Independent Claims 1 -3= X \$84.00 \$ MULTIPLE DEPENDENT CLAIM(S) (if applicable) \$ TOTAL OF ABOVE CALCULATIONS = \$1020.00 Reduction of ½ for filing by small entity, if applicable. A Small Entity Statement \$510.00 must also be filed (Note 37 CFR 1.9, 1.27, 1.28). SUBTOTAL = \$510.00 Processing fee of \$130.00 for furnishing English translation later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(f). TOTAL NATIONAL FEE \$510.00 Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). TOTAL FEES ENCLOSED \$510.00 Amount to be \$ refunded: \$ charged: A check in the amount of \$510.00 to cover the above fees is enclosed. Please charge my Deposit Account No. 04-0753 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-0753. A duplicate copy of this sheet is enclosed. \_\_ is made by credit card. A Credit Card Payment Form (PTO-2038) is attached hereto. The

Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR 1.16 or any patent application processing fees under 37 CFR 1.17, or credit any over payment to the credit card account shown on the attached Credit Card Payment Form. Refund of all amounts overpaid, including those of twenty-five dollars or less, is specifically requested. Any fees not accepted by the credit card shown on Form PTO-2038 may be charged to Deposit Account No. 04-0753.

REGISTRATION NUMBER

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Dkt. 02075

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Group Art Unit:

ASHOK SETHI et al

Examiner:

Serial No.: 10/089,102

Filed: April 19, 2002

For: IMPLANT ALIGNMENT

#### SECOND PRELIMINARY AMENDMENT

Honorable Assistant Commissioner for Patents Washington, DC 20231

Sir:

Please amend the above-identified application as follows:

#### IN THE CLAIMS:

Please cancel claims 1-8 without prejudice or disclaimer of the subject matter thereof, and add the following new claims:

10. (New) Apparatus for alignment of a dental prosthesis, said apparatus comprising:

an implant for insertion in the jaw bone of a patient, the implant having a generally axial bore;

a plurality of angled templates for use with said implant, each of said templates having a circular cross section locator lug for inter-engagement with the axial bore

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of the implant; and

an abutment to which the prosthesis is formed;
wherein said plurality of templates are provided in a
range of angles from 5° to 45°, whereby in use one of said
templates is selected for use in determining which abutment to
use, the selection of said one template being made on the
basis of a correct orientation of an alignment element thereof
relative to the existing teeth of the patient.

- 11. (New) Apparatus according to claim 10, wherein the locator lug comprises a frusto-cone having a portion of smaller diameter towards a free end of the lug.
- 12. (New) Apparatus according to claim 11, wherein the locator lug further comprises an extension piece extending generally axially along an axis of the frusto-cone.
- 13. (New) Apparatus according to claim 12, further comprising a plurality of driving flats disposed about a mouth of the template bore and adapted for inter-connection with corresponding elements on the implant.
- 14. (New) Apparatus according to claim 11, wherein the frusto-cone is additionally provided with a plurality of driving flats.
- 15. (New) Apparatus according to claim 10, wherein the template comprises a shaft remote from the locator lug, said shaft being adapted to mimic the angle of existing teeth when

rotated.

16. (New) A method for alignment of a dental prosthesis, said method comprising:

inserting an implant in the jaw bone of a patient, the implant having a generally axial bore;

providing a plurality of angled templates for use with said implant, each of said templates having a circular cross-section locator lug for inter-engagement with the axial bore of the implant and wherein said plurality of templates are provided in a range of angles from 5° to 45°; and

selecting one of said templates for use in determining which abutment to use, the selection of the template being made on the basis of a correct orientation of an alignment element thereof relative to the existing teeth of the patient.

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#### REMARKS

A new set of claims has been added for initial examination, the new claims corresponding to the claims attached to the International Preliminary Examination Report.

Respectfully submitted,

Ira J. Schultz

Registration No. 28666

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Dkt. 02075

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Group Art Unit:

ASHOK SETHI et al

Examiner:

Serial No.: US National Phase of

PCT/GB00/04087

Filed: concurrently herewith

For: IMPLANT ALIGNMENT

#### PRELIMINARY AMENDMENT AND INFORMATION DISCLOSURE STATEMENT

Honorable Assistant Commissioner for Patents Washington, DC 20231

Sir:

Before calculation of the filing fee, please amend the above-identified application as follows:

#### IN THE ABSTRACT:

Please add the following abstract:

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DENNISON, SCHULTZ & DOUGHERTY

#### ABSTRACT OF THE DISCLOSURE

An apparatus for alignment of dental implants in which an implant in provided with a generally axial bore and a plurality of angled templates, each adapted for operative inter-connection with the bore of the implant. Each template includes a locator lug adapted for inter-engagement with the axial bore of the implant, each lug having a circular cross-section.

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#### IN THE CLAIMS:

Please amend the claims as set forth hereinbelow and in the attached appendix:

- 3. (Amended) An apparatus according to claim 1 wherein the locator lug is separate from the template and the template is provided with a bore which is adapted to be generally coaxial with the bore of the implant in use.
- 4. (Amended) An apparatus according to claim 1 wherein the locator lug is a frusto-cone having its portion of smaller diameter towards the free end of the lug.
- 7. (Amended) An apparatus according to claim 4 wherein the frusto-cone is additionally provided with a plurality of driving flats.
- 8. (Amended) An apparatus according to claim 1 wherein the template comprises a shaft remote from the locator lug, said shaft has been adapted to mimic the angle of existing teeth when rotated.

Please cancel claim 9 without prejudice or disclaimer of the subject matter thereof.

#### REMARKS

The claims have been amended to delete all multiple dependencies.

Attached is the search report of the corresponding PCT application, together with copies of the references cited therein, which are listed on the attached Form PTO-1449.

Respectfully submitted,

ıra J. Schultz

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#### APPENDIX

#### IN THE CLAIMS:

- 3. (Amended) An apparatus according to [either claims] claim 1 [or 2] wherein the locator lug is separate from the template and the template is provided with a bore which is adapted to be generally coaxial with the bore of the implant in use.
- 4. (Amended) An apparatus according to [claims] claim 1 [or 2] wherein the locator lug is a frusto-cone having its portion of smaller diameter towards the free end of the lug.
- 7. (Amended) An apparatus according to [any of claims 4 to 6] claim 4 wherein the frusto-cone is additionally provided with a plurality of driving flats.
- 8. (Amended) An apparatus according to [any preceding claim] claim 1 wherein the template comprises a shaft remote from the locator lug, said shaft has been adapted to mimic the angle of existing teeth when rotated.

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#### IMPLANT ALIGNMENT

The present invention relates to the alignment of dental implants and to a method for their alignment. In the Probe, 5 September 1998, I have described a dental implant and a method for its insertion. In this arrangement a site is selected so that it is in the middle of a ridge. The jaw bone is drilled using internally irrigated titanium alloy burs so that it is sited between the labial and palatal cortical plates, making sure that the adjacent teeth and anatomical structures are avoided. The implant is inserted until level with the bone.

Abutment or template selection is effected by using a trial 15 abutment (template) which measures the restorative angle, allows the implant to be positioned to the correct depth, and aligns the driving flat (or hex) in the correct plane.

The trial abutment (template) should fit within the hollow 20 prosthetic envelope. This ensures that the final abutment will be in the right position. Any adjustments to the position of the implant can now be made before it is integrated. The cover screw is then replaced, the wound is sutured and the implant is allowed to integrate over a period 25 of about six months.

The depth to which the implants are placed is important since if they are too deep this may result in bone loss (to the 1st thread) which is not ideal, and if they are not deep enough 30 they may become exposed prematurely. That a trial abutment or template is necessary is shown by the fact that otherwise there is no way that the angle of the abutment can be selected and the plane of orientation measured or changed unless this

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is done at the 1st stage of surgery.

In order to achieve this, previously each template was provided with a downwardly depending lug provided with a 5 plurality of driving planes for co-operation with similarly shaped receptor planes in the corresponding bore in which it was adapted to fit. Said "internal hex" arrangements can be satisfactory but give rise to a number of problems. In the first place the internal driving planes have to be small and 10 therefore their manufacture is relatively difficult. However because they can be subjected to significant rotational forces during positioning the manufacturing tolerances must be of a low order. Most of all the utilisation of the internal driving flats, as previously suggested raises the difficulty 15 that the dentist cannot be sure that the template is fully "home" on the implant, which can give rise to misalignments once full implant integration has occurred.

The need therefore exists for a template which will drive the 20 implant during rotation only if the template and the implant are fully engaged. Further there is a need to ensure that the turning moment applied by the template to the implant is as positive as possible.

- 25 According to the present invention there is provided an apparatus for the alignment of a dental implant, said apparatus comprising an implant comprising a generally axial plind bore and a plurality of angled templates each adapted for operative inter-engagement with the bore of the implant;

  30 characterised in that each template comprises a locator lug for inter-engagement with the price of the inter-engagement.
- for inter-engagement with the axial bore of the implant, said lug comprising a circular cross-section. It is preferred that the lug shall have a frusto-conical section for inter-

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engagement with a corresponding bore in the implant (or taperlock). In a further embodiment the frustro-conical section includes a plurality, preferably four, of driving planes for co-operation with the bore of the implant. It is also s preferred that the frusto-conical section terminates towards its free end in a portion of a smaller diameter.

Alternatively the locator lug may be of a right cylindrical configuration and a plurality of driving planes are provided ld internally of the body of the template for operative interconnection with a corresponding set of driving flats positioned about the mouth of the bore of the implant.

In an alternative arrangement the locator lug is separate 15 from the template and the template is formed with a bore that is adapted to be co-axial in use with that of the implant.

In a preferred embodiment the template terminates at its intended upper end remote from the lug in a shaft or peg which 20 has a generally elongate configuration, often of a right cylindrical shape, so that whatever its rotational position it will mimic the correct angle of the existing teeth in use.

- 25 By means of the present invention the implant will only rotate to its final position when fully inter-engaged. Partial inter-engagement, and hence misalignment of the template with the implant, is thus much less likely to occur.
- 30 The invention will now be described, by way of illustration only, with reference to the accompanying drawings wherein:-Figure 1 shows a side view from below of a first template of the invention:

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Figure 2 shows a side view from below of a final abutment for use with the invention;

Figure 3 shows a side view of the first template in crosssection;

5 Figure 4 shows a side view from below of another template of the invention;

Figure 5 shows a side view a template somewhat as shown in Figure 1 but with a plurality of driving planes disposed in frusto-conical portion.

10 Figure 6 shows an exploded side view of a template with a frusto-conical lug in part vertical section;

Figure 7 shows a side view in part section of a template with locking flats to form a external "hex" on the implant;

Figure 8 shows an exploded side view in part section of a 15 template and implant in accordance with Figure 2,

Figure 9 shows a side view part section of the arrangement of Figure 4, and

Turning first to Figures 1 to 4, Figure 1 shows a template 20 comprising a main body which is generally angled to the axis of an implant.

A template alignment shaft 3 and body 4 are angled to the axis of the implant in use by an amount varying from  $5^{\circ}$  and  $45^{\circ}$ 25 degrees. The template and the implant are arranged such that they are correctly positionable prior to integration relative to a bore positioned in the jaw by means of the correct orientation of the shaft 3 relative to the existing teeth in use.

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As is shown in Figure 1, the body of the template 1 terminates in generally downwardly depending frusto-conical portion 5 and a right cylindrical extension piece 6. It is arranged

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that frusto-conical portion 5 and the extension piece 6 are generally co-axial with the bore of the implant 2. As will be appreciated the locking force between the implant and the template is only established when they are fully inter-5 engaged. A similar arrangement to that shown in Figure 1 is shown in cross-section in Figure 3.

A similar arrangement is shown in Figure 2. arrangement the body 4 is provided along its length with an 10 upper most aperture 7, said aperture extending downwardly to terminate at a lower most aperture 8. A bolt (shown generally in Figures 6,7 and 8) passes through the body to locate the template on the implant as necessary. It is desirable that such a bolt should be provided with an Allen keyway for 15 tightening purposes.

Figure 4 provides an alignment shaft 3 similar to that shown in Figure 1 and a body 4, again similar to that shown in Figure 1 with the exception that in this arrangement a 20 rotation aperture 12 is provided through the body 4 in order to locate a rotation rod therein. The arrangement of Figure 4 also provides a downwardly depending locator lug 11 which has a circular cross-section which is in the form of a right cylinder for location in a corresponding bore in the implant.

Figure 5 shows an arrangement similar to Figure 1 but wherein the frusto-conical portion 5 includes a plurality of driving planes 20, but wherein the radially outer edge (21) of the planes 20 has a frusto-conical aspect so that it forms a 30 continuous surface with the frusto-conical portion 5. This allows the template 1 to inter-engage with a co-operating axial bore while also having a positive inter-engagement therewith.

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An exploded diagram of the implant and template assembly according to the present invention, somewhat as shown in Figure 2, is shown in Figure 6. In this arrangement, shown in partial cross-section, a threaded bolt 18 is provided with 5 an Allen key aperture 19 and is adapted for location in an upper bolt aperture 7. The shaft of the bolt 18 passes through the frusto-conical portion of the template 5 and through the lower bolt aperture 8.

10 With the implant and the template fully inter-engaged, the threaded end of the bolt 18 enters a recess 16 in the implant 2. Implant 2 is provided to its exterior with a ribbed edged body 14 terminating towards its upper edge in an annular implant head 13. At its other (lower) end is a cut out 15 for 15 reasons of bone integration.

In use the bolt 18 secured in the aperture 7 passes into the recess 16 and into the screw thread cavity 17, whereupon rotation of the Allen key in aperture 19 causes the template 20 1 to lock onto the implant 2 in a temporary fashion. Allen key can then be used to rotate the template 1 into its correct orientation relative to other teeth. The bolt 18 then may be withdrawn without disturbing the implant 2 and the template 1 may be removed and recorded.

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A similar arrangement is shown in Figure 7 but in this instance bolt 18 is provided with standard external driving flats 18', while the template 1 is provided with internal driving flats 10 only.

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In Figure 8 there is provided an exploded arrangement showing in part section an embodiment of Figure 3. Its modus operandi has been fully described with regard to Figure 6. The only

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difference lies in that instead of the frusto-conical portion 5, there is provided a plurality of internal locking flats 10 for inter-engagement with an external "hex" 20 secured about the mouth of the recess 16 in the implant 2. It will be 5 appreciated that the effect of the external hex 20 is to locate the body 4 of the template 1 but only when the bolt 18 is fully inter-engaged by means of the Allen key engaged in the aperture 19. Again by means of the Allen key (not shown) template 1 can be placed in its correct position by thereby 10 rotating the implant 2 and subsequently removing the same.

A similar arrangement is shown in Figure 9 which shows the arrangement of Figure 4 in side view and in partial crosssection. The locator lug ll is right cylindrical and acts to 15 locate the template 1 in position in the implant 2 but of course only once fully inter-engaged. It may then be rotated once the flats 10 have been inter-engaged with the external hex 20 as shown in Figure 8.

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#### Claims

1. Apparatus for use in the alignment of a dental 5 prosthesis, said apparatus comprising:-

an implant (2) for insertion in the jaw bone of a patient, the implant having a generally axial bore (17);

a plurality of angled templates (1) for use with said implant, each one of said templates having a circular cross10 section locator lug (6) for inter-engagement with the axial bore of the implant; and

an abutment to which the prosthesis is formed;

wherein said plurality of templates (1) are provided in a range of angles from 5° to 45°, whereby in use one of said 15 templates is selected for use in determining which abutment to use, the selection of said one template being on the basis of a correct orientation of an alignment element thereof relative to the existing teeth of the patient.

- 20.2. Apparatus according to claim 1 wherein the locator lug comprises a frusto-cone having its portion of smaller diameter towards the free end of the lug.
- 3. Apparatus according to claim 2 wherein the locator lug 25 further comprises an extension piece extending generally axially along the axis of the frusto-cone.
- 4. Apparatus according to claim 3 further comprising a plurality of driving flats disposed about the mouth of the 30 template bore and adapted for inter-connection with corresponding elements on the implant.
  - 5. Apparatus according to any of claims 2 to 4 wherein the

frusto-cone is additionally provided with a plurality of driving flats.

- 6. Apparatus according to any preceding claim wherein the 5 template comprises a shaft remote from the locator lug, said shaft has been adapted to mimic the angle of existing teeth when rotated.
- 7. A system for use in the alignment of a dental prosthesis, 10 said system comprising:-

inserting an implant (2) in the jaw bone of a patient, the implant having a generally axial bore (17);

providing a plurality of angled templates (1), for use with said implant, each one of said templates having a 15 circular cross-section locator lug (6) for inter-engagement with the axial bore of the implant and wherein said plurality of templates (1) are provided in a range of angles from 5° to 45°;

selecting one of said templates for use in determining 20 which abutment to use, the selection of the template being on the basis of a correct orientation of an alignment element thereof relative to the existing teeth of the patient.

#### (19) World Intellectual Property Organization International Burcau

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#### (43) International Publication Date 26 April 2001 (26.04.2001)

#### PCT

#### (10) International Publication Number WO 01/28450 A1

(74) Agents: SUER, Steven, Johannes et al.; Ablent & Sub-

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21 October 1999 (21.10.1999)

(71) Applicants and

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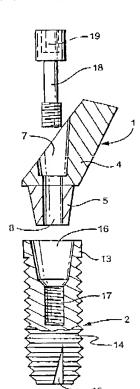
(84) Designated States (regional): European patent (AT. BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, TT, LU, MC, NL. PT, SE).

#### Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### (54) Title: IMPLANT ALIGNMENT

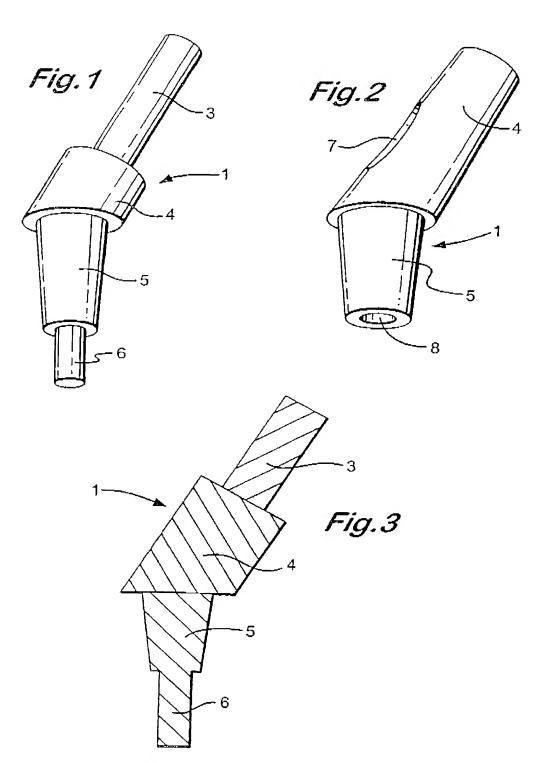


(57) Abstract: The present invention relates to apparatus for the alignment of dental implants, said apparatus comprising an implant (2) provided with a generally axial bore and a plurality of angled templates (1) each adapted for operative interconnection with the bore of the implant. Each template comprises a locator lug adapted for inter-engagement with the axial bore of the implant, said lug comprising a circular cross-section.

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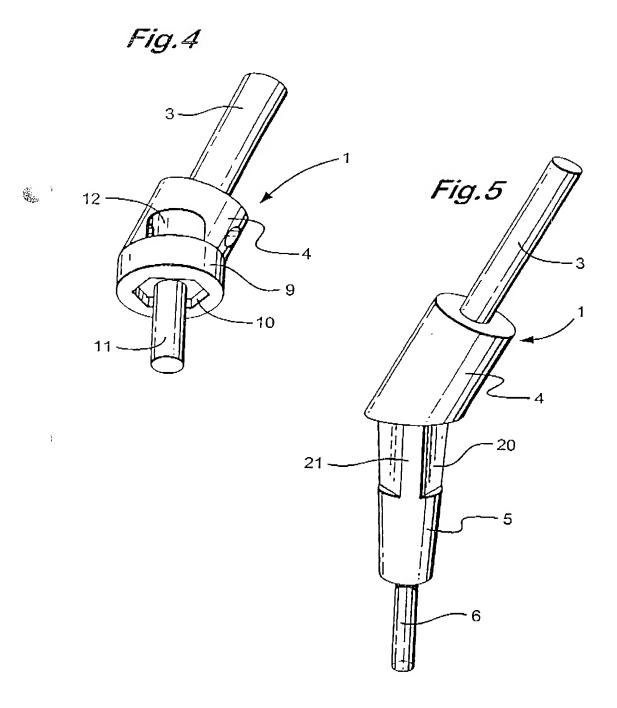
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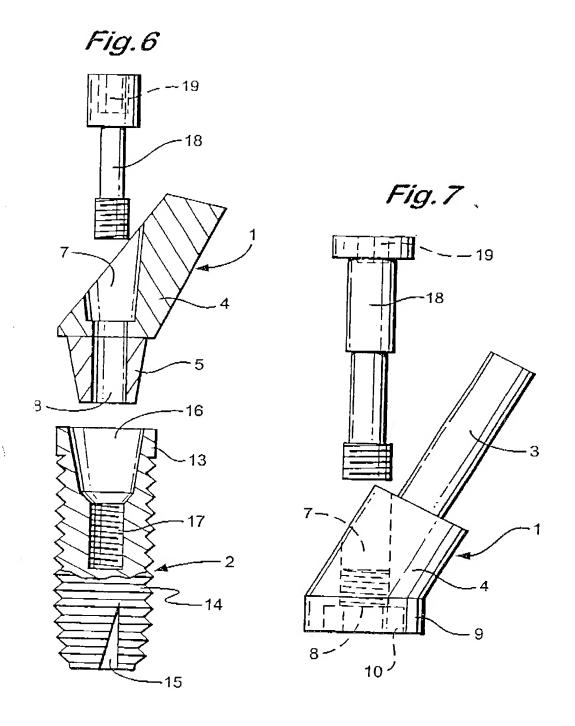
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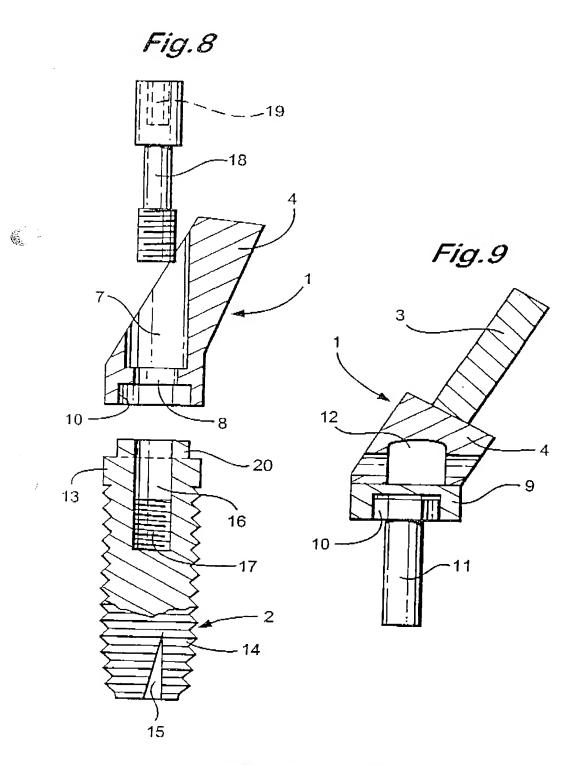


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. ,		DECLARATION I	FOR UTILITY (	OR DESIGN PATEN			
	As a bel	low named inventor, I hereb	y declare that:	Docket N	To		
*. ***				ātėd below next to my name.			
	I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled IMPLANT ALIGNMENT						
					specificationofwhich		
	(check o	one) XX is described at	nd claimed in PCT Inte	ernational Application PCT/C	GB00/04087 filed on		
	(OR)	is described in Unite	d States Application N	119, 2002 (if applicable)	filed		
	on(MM/	DD/YYYY)	d States Application 14	(OR) is an	ched hereto.		
	on(MM/DD/YYYY)						
	I acknov	vledge the duty to disclose in	nformation which is m	aterial to patentability as defi	ned in 37 CFR §1.56.		
	I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on which priority is claimed.						
$\overline{}$		Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Claimed? Yes No		
		9924959.1	Great Britain	October 21, 1999	XX		
	<u> </u>			ar , , <u>, , , , , , , , , , , , , , , , ,</u>			
	I hereby	claim the benefit under 35	U.S.C. 119(e) of any 1	United States Provisional App	plication(s) listed below.		
	I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or 365(c) of any PCT International application designating the Unites States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:						
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	As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:						
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	informati false state	on and belief are believed to ements and the like so made	be true; and further to are punishable by fine	knowledge are true and that hat these statements were ma e or imprisonment, or both, u the application or any patent	de with the knowledge that willful under 18 U.S.C. \$1001 and that		
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